

Roof automatic

With this adaptive module can you open or close your roof automatically after a short manipulation of the roof switch.

Installation and operating instructions



Generally

We congratulate to you to the acquisition of the roof automatic module. With this module you can open or close your roof with a short manipulation of the roof switch automatically. The module is equipped with a training function, with which you can adapt the module particularly on your vehicle. Further the automatic function can be activated or deactivated over the roof switch.



Reference



Some terms, which are mentioned in this documentation, are registered registered trade marks or to have a comparable status. They are used without guarantee of the free usefulness.

Please you consider exactly the points of the fitting instruction. Arise due to equipment and model variants of their vehicle differences between our data to cables and actual conditions. In this case we recommend to catch up additional information with your car workshop.

We do not take over adhesion for damage or lack, those by incorrect installation, inappropriate storage, use, operation or careless treatment, develop. Likewise any guarantee expires with interferences or repairs through from us not authorized persons. The battery change at the transmitter is of it excluded. The manufacturer reserves itself the right to amend or improve the specification at any time.

This fitting instruction is to put you into the position to insert the product to take and correctly use in enterprise. Only a professional assembly and a correct start-up ensure that our product works perfectly.



ATTENTION



Assembly, connection, start-up or repair by not qualified personnel and/or not intended use can entail personal injuries, as well as damages to property or environmental damage.

Also without damage you lose its requirement warranty for our product in this case.

Let the controller in the doubt from your car workshop build in!

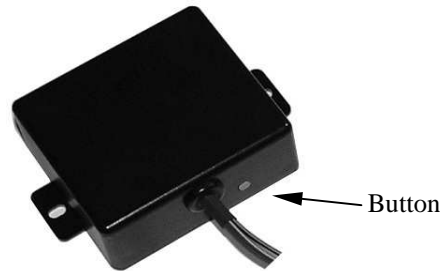
The use and the installation of the equipment take place in principle on own danger!

Scope of supply:

- 1x Roof automatic module
- 1x Assembly accessories
- 1x Operating instructions
- 1x Fitting instruction

Operating instructions

1. Generally:



Picture 1

- The roof can be automatically opened or closed with the roof switch in the vehicle inside.
- Automatic for the roof switch in the vehicle inside can be activated or deactivated over the roof switch.
- Opening and closing can be adapted by the time training function particularly to the vehicle.
- The roof movement can be stopped at any time over the roof switch.
- When the controller not react, can it put back, by pressing the key at the controller 5 seconds long.
- The controller behaves with the vehicle diagnosis completely neutrally and affects by the galvanic separation in no way electronic construction units



In delivering condition the roof automatic is deactivated.



Always make sure that before opening or reasoning nothing is in the motion travel of the roof. Observe particularly attentively whether something comes into the motion travel of the roof, while you open or close the roof, so that you can react if necessary immediately.

During neglect danger of damages to property or person.

2. Functions:

- **Time for open the roof train**

Operate the tracer on the module. Afterwards the module is in the training mode. Operate now the roof switch in the closed condition until the roof is completely opened. As soon as the tracer is operated, the time is measured, until you release the roof switch again. This measured time is stored and serves for the next roof opening as time base. The time is stored and remains also after removal of voltage supply.

The training mode is left automatically, if the recent time were stored or within 15 seconds of the roof switches were not operated.

On delivery a time is given by 40 seconds.

Depending upon outside temperature and operating temperature of the vehicle the opening time of the roof can vary. Give when training still little reserve time in addition so that the roof is opened also always correctly.

- **Time for close the roof train**

Operate the tracer on the module. Afterwards the module is in the training mode. Operate now the roof switch in the opened condition until the roof is completely closed. As soon as the tracer is operated, the time is measured, until you release the roof switch again. This measured time is stored and serves for the next roof closing as time base. The time is stored and remains also after removal of voltage supply.

The training mode is left automatically, if the recent time were stored or within 15 seconds of the roof switches were not operated

On delivery a time is given by 40 seconds

Depending upon outside temperature and operating temperature of the vehicle the closing time of the roof can vary. Give when training still little reserve time in addition so that the roof is closed also always correctly.

- **Open roof with roof switch:**

To open the roof automatically, press the roof switch in the open position. However you can release the roof switch after 3 seconds. The roof continues to open. As soon as the trained opening time ran off, the control switches off automatically. A condition for this function is that the ignition with the car key is switched on. The window opening function (roof switches twice operate briefly one behind the other) is thereby not affected and functioned further.

During opening the roof the engine or the ignition is switched off, the roof leads its movement to end. As soon as the trained time ran off, the control switches off automatically.

- **Close roof with roof switch:**

To close the roof automatically, press the roof switch in the close position. However you can release the roof switch after 3 seconds. The roof continues to close. As soon as the trained closing time ran off, the control switches off automatically. A condition for this function is that the ignition with the car key is switched on. The window closing function (roof switches twice operate briefly one behind the other) is thereby not affected and functioned further.

During opening the roof the engine or the ignition is switched off, the roof leads its movement to end. As soon as the trained time ran off, the control switches off automatically.

- **Stop roof movement**

If you should stop the automatic roof movement, then you must operate only the roof switch in any direction. The roof movement is stopped immediately.

- **Roof automatic activate**

In order to activate the comfort mechanism for the roof switch in the vehicle inside, you operate the roof switch „roof open“ 3x in rapid succession. The attitude is stored and remains also after removal of voltage supply.

- **Roof automatic deactivate**

In order to deactivate the comfort mechanism for the roof switch, you operate the roof switch „roof close“ 3x in rapid succession. The attitude is stored and remains also after removal of voltage supply



Deactivate comfort automatic for the roof, if you let drive other persons thereby or give your vehicle for inspection. Stranger persons count during the covering control not on this function and could wrongly react.



- **Reset**

If the controller should not react any longer, you can accomplish a RESET, by pressing the key at the controller longer than 5 seconds long. With a RESET all adjustable values and functions are reset on factory settings.

Factory Settings:

Time for roof opening: 40 Seconds
 Time for roof closing: 40 Seconds
 Roof automatic: deactivated

Fitting instruction

1. Generally:

The controller is intended to the installation into vehicles with 12V DC (negative pole at ground).



Risk of short circuit



Short-circuits in the electrical system of the car can cause cable fires, battery explosions and damages of other electronic systems. Clamp therefore before beginning of the work the negative pole of the automotive battery! Isolate all connections sufficiently!

Guarantee that no cables can be squeezed and chafed through!

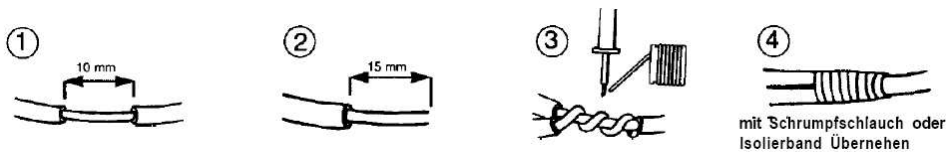
When clamping the negative pole of the battery all volatile electronic memory loses their data. Make sure therefore before clamping the battery that you can restore all appropriate data after attaching the battery!

With vehicles with ESP this must again be adjusted. In addition the steering wheel must be turned once completely to the left and afterwards completely to the right with running engine.

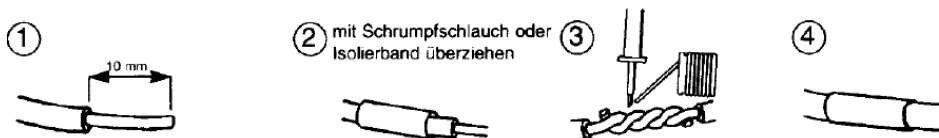
2. Manufacture from line connections:

The safest method for connecting the lines is, if the lines to be soldered with one another. The following pictures show you, as you the lines best to interconnect can.

Wires parallel connect:



Two single wires interconnect:



Lugs install:



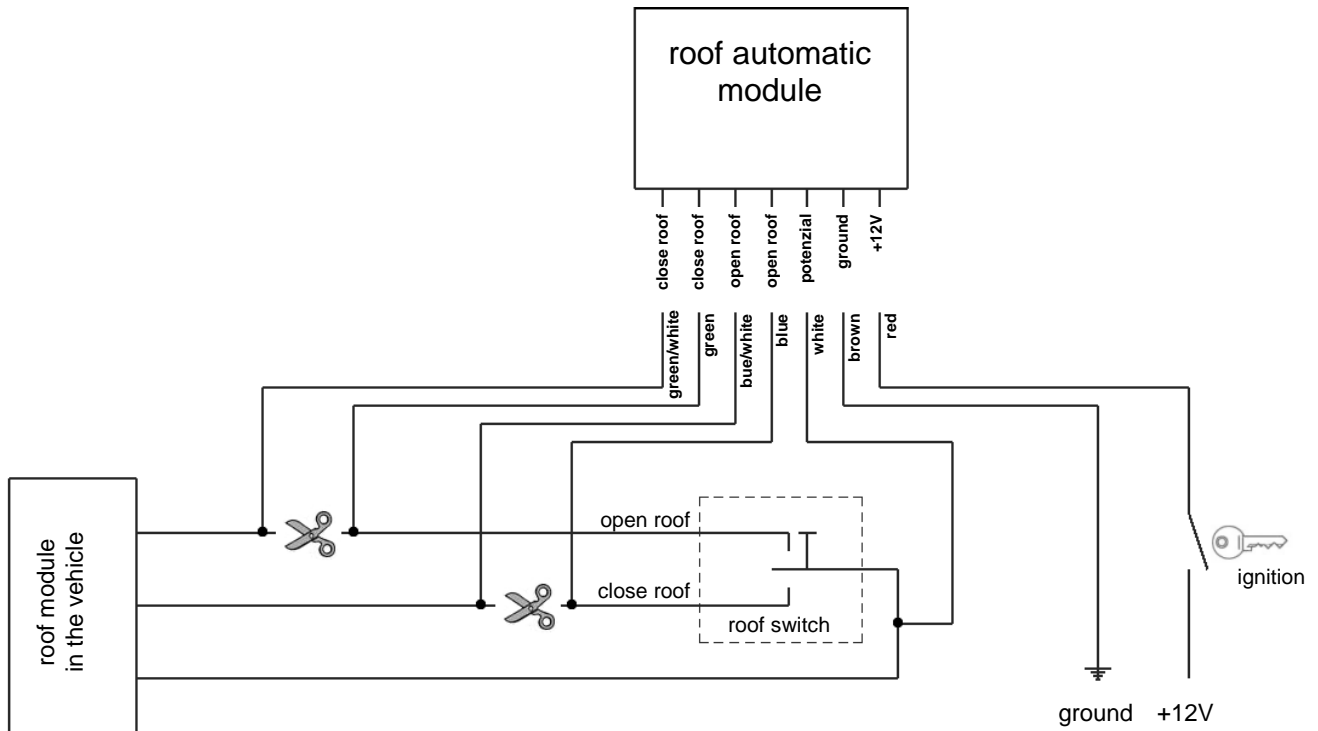
High-speed links install:

Is that solder the lines not possible, use the provided high-speed links. Press again these after engaging again with pliers, so that the connection is safe.



3. Connection diagram:

The following picture 2 shows, how the roof automatic-module are integrated into the vehicle electronics. Make sure that all lines are attached correctly. Wrong attaching can destroy the module or even the combination function module of the vehicle. The lines consist completely of FLRY-A lines. FLRY lines are lines, which are manufactured particularly for the vehicles. All lines in a vehicle consist of FLRY lines.



Picture 2

4. Installation:

- use only suitable tools.
- avoid locations with high temperatures or strong variations in temperature. (Recommended location: In the proximity of the roof switch in the vehicle, you consider also possibly provided vehicle-specific fitting instructions).
- clamp the ground wire of the negative pole of the battery off.
- Remove carefully the roof switch in the vehicle inside.
- Determine the following signals at the roof switch with a measuring instrument:
 - „open roof“
 - “close roof“
 - inlet
- Connect the control lines as follows (see also picture 2):
 - Connect the red line with a line, those witch switched on ignition +12V tension leads (e.g. cigarette lighter)
 - Connect the white line with the inlet to the roof switch
 - Cut the line for the signal “open roof”
 - Connect the green line with the line of the roof switch coming
 - Connect the green/white line with the line of the controller coming
 - Cut the line for the signal “close roof”
 - Connect the blue line with the line of the roof switch coming
 - Connect the blue/white line with the line of the controller coming

**Reference:**

Due to the universal circuit design the module has a quiescent current of approx. 17mA. If you connect the voltage supply (red line) directly with the direct +12V supply of the vehicle, exists the danger, which will discharge the battery with longer service life of the vehicle.

5. Last assembly steps:

- Connect the brown line with the vehicle ground (minus). Use for it a central ground point. Use the provided lug.
- The negative pole of the automotive battery again attach.
- Before you insert the roof switch, accomplish please a functional test (see point 6).
- Accommodate the module in such a way that no lines are damaged.
- Build in carefully the roof switch.

6. Functional test:

- Activate the roof automatic, by operate the roof switch in the direction „open roof“.
- Operate the roof switch to open the roof approx. 3 seconds and release this then again. When correct assembling the lines the roof is opened automatically.
- If the roof is opened, operate the roof switch for closing the roof approx. 3 seconds and release this then again. When correct assembling the lines the roof is opened automatically.

7. Disturbances an errors:

- **The roof cannot be steered:**
 - Current supply is missing. -> *Power connections and fuse examine.*
 - Connection at the roof switch incorrectly. -> *All connections exactly examine.*
- **Automatic function cannot be activated**
 - Current supply is missing. -> *Power connections and fuse examine.*
 - “Open roof” and “close roof” confounded. -> *Test it with “close roof” and if it functions, exchange connections.*
 - Connection at the roof switch incorrectly. -> *All connections exactly examine.*

8. Technical data:

Operating voltage:	10-18 VDC
Power input peace:	ca. 17 mA (only if ignition on)
max. current	5A (for „open roof“ or „close roof“)
Operating temperature:	-10 °C bis +60 °C
Dimensions:	89 mm x 60 mm x 30 mm (inclusive mounting straps)
Weight:	120 gr.

During excess of the limit values indicated here the controller can take to durable damage!

If not differently notes, all values apply at ambient temperature 20°C.

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